AMENDMENTS TO THE CLAIMS

The text of all pending claims (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered). The following listing of claims replaces all prior versions, and listings, of claims in this application.

Please AMEND claims 22, 31, 33, and 34 to read as follows.

1. (ORIGINAL) A projection system comprising:

light emitting units emitting light beams of different wavelengths;

a scrolling unit having spirally arranged cylinder lens cells which separate the light beams into color beams and scroll the color beams when the scrolling unit is rotated; and

a light valve that receives the color beams transmitted by the scrolling unit and forms a color image by turning pixels on or off according to an input image signal.

2. (ORIGINAL) The projection system of claim 1, further comprising first and second fly-eye lenses which receive the color beams transmitted by the scrolling unit, diverge the color beams, and transmit the color beams to the light valve.

3. (ORIGINAL) The projection system of claim 2, further comprising a relay lens that is disposed on a light path between the second fly-eye lens and the light valve to focus the color beams transmitted by the second fly-eye lens onto respective color areas of the light valve.

4. (ORIGINAL) The projection system of claim 3, wherein the light emitting units are one of an LED, a laser diode, an organic EL, and an FED.

5. (ORIGINAL) The projection system of claim 3, further comprising:

a first cylinder lens disposed between the light emitting units and the scrolling unit to control a width of the light beams emitted by the light emitting units;

a second cylinder lens paired with the first cylinder lens and disposed between the scrolling unit and the second fly-eye lens to collimate the color beams transmitted by the scrolling unit, the first and second cylinder lenses cooperating to control the width of the light

beams incident upon the scrolling unit and the color beams on the first fly-eye lens.

6. (ORIGINAL) The projection system of claim 1, further comprising a collimating lens that collimates the light beams emitted from the light emitting units.

7. (ORIGINAL) The projection system of claim 1, further comprising optical fibers disposed between the light emitting units and the collimating lens to respectively transmit the light beams.

8. (ORIGINAL) The projection system of claim 1, further comprising:

a first cylinder lens disposed between the light emitting units and the scrolling unit to control a width of the light beams emitted by the light emitting units;

a second cylinder lens paired with the first cylinder lens and disposed between the scrolling unit and the second fly-eye lens to collimate the color beams transmitted by the scrolling unit, the first and second cylinder lenses cooperating to control the width of the light beams incident upon the scrolling unit and the color beams on the first fly-eye lens.

9. (ORIGINAL) The projection system of claim 1, wherein the light emitting units are one of an LED, a laser diode, an organic EL and an FED.

10. (ORIGINAL) The projection system of claim 1, wherein the first and second fly-eye lenses have a plurality of 2 dimensionally arranged lens cells.

11. (ORIGINAL) The projection system of claim 2, wherein the first fly-eye lens is disposed at a focal plane of the scrolling unit and the color beams transmitted from the scrolling unit are focused on the first fly-eye lens.

12. (ORIGINAL) The projection system of claim 1, wherein the scrolling unit has at least two cylinder lens cells.

13. (ORIGINAL) The projection system of claim 1, wherein the scrolling unit has the same number of cylinder lens cells as that of the light emitting units.

14. (ORIGINAL) The projection system of claim 1, wherein the scrolling unit has 3 cylinder lens cells.

15. (ORIGINAL) The projection system of claim 1, wherein the scrolling unit is rotated at a constant speed in a direction.

16. (ORIGINAL) The projection system of claim 1, wherein a scrolling speed of the scrolling unit is synchronized with an operating frequency of the light valve.

17. (ORIGINAL) The projection system of claim 16, wherein an increase in one of the number of cylinder lens cells and the rotational speed of the scrolling unit increases the scrolling speed.

18. (ORIGINAL) The projection system of claim 16, wherein a decrease in one of the number of cylinder lens cells and the rotational speed of the scrolling unit decreases the scrolling speed.

19. (ORIGINAL) The projection system of claim 1, wherein the scrolling unit is a single optical element.

20. (ORIGINAL) The projection system of claim 1, wherein the light emitting units emit three color beams, one color beam having a wavelength corresponding to red, one color beam having a wavelength corresponding to green, and one color beam corresponding to blue.

21. (ORIGINAL) The projection system of claim 1, wherein the first fly-eye lens adjusts the width of the light beams so as to match the shape of the cylinder lens cells and thereby minimize light loss.

22. (CURRENTLY AMENDED) A method of projecting an image, comprising:

emitting light beams of different wavelengths;

separating the emitted light beams into a plurality of color beams and scrolling the color beams by rotating about a single axis an optical element arranged so that rotation thereof simulates linear movement of the optical element;

focusing the color beams onto a light valve so as to form color bars corresponding to each of the colors in the plurality of color beams, the color beams received at different locations on the light valve; and

turning pixels of the light valve one of on and off according to a received image signal.

23. (ORIGINAL) The method of claim 22, further comprising collimating the light beams before the separating.

24. (ORIGINAL) The method of claim 22, further comprising adjusting the width of the light beams before the separating so as to minimize light loss.

25. (ORIGINAL) The method of claim 22, further comprising controlling a width of the emitted light beams after the separating.

26. (ORIGINAL) The method of claim 22, wherein the optical element includes cylindrical lens cells located so as to be in the same positions, when the scrolling is performed at a frequency, as lens cells on a linearly traveling optical element scrolling color beams at the frequency.

27. (ORIGINAL) A projector comprising:

a light emitting unit having a plurality of light emitting elements that emit light beams of different wavelengths along a light path;

a scrolling unit rotatably disposed along the light path and having a plurality of spirally arranged cylinder lens cells that, when the scrolling unit is rotated, separate the light beams into color beams and scroll the color beams; and

a light valve disposed at an end of the light path and forming a color image by receiving, at different locations, color beams transmitted from the scrolling unit and turning pixels one of off and on in accordance with an input image signal.

28. (ORIGINAL) The projector of claim 27, further comprising a collimator disposed along the light path between the light emitting unit and the scrolling unit.

29. (ORIGINAL) The projector of claim 27, further comprising a light beam width adjusting unit which adjusts the width of the light beams so that a shape of each of the light beams more closely matches the shape of the cylindrical lens cells that without width adjustment.

30. (ORIGINAL) The projector of claim 29, wherein the light beam width adjusting unit includes a first cylinder lens disposed between the light emitting unit and the scrolling unit which controls the width of the light beams and a second cylinder lens disposed between the scrolling unit and the light valve which collimates the color beams.

31. (CURRENTLY AMENDED) A projection system comprising:

a plurality of light emitters each emitting a light beam of a wavelength corresponding to a different color, the light emitters disposed at a light emitting end of a light path;

a light valve which forms a color image by turning pixels one of on and off according to an input image signal, the light valve disposed at an image forming end of the light path;

a collimator lens disposed in the light path between the plurality of light emitters and the light valve, the collimator transmitting incident light beams at least nearly parallel;

a scrolling unit rotatably disposed on the light path between the collimator lens and the light valve, the scrolling unit <u>rotatable about a single axis,</u> receiving incident light beams, separating the incident light beams into color beams, and scrolling the color beams so that they are received by the light valve at different portions thereof; and

a pair of fly-eye lenses disposed on the light path between the scrolling unit and the light valve which receive the scrolling color beams and focus the color beams onto relay lens disposed on the light path between the pair of fly-eye lenses and the light valve and transmits to the light valve received color beams from the pair of fly-eye lenses.

32. (ORIGINAL) The projector of claim 31, further comprising a first cylinder lens disposed between the collimator and the scrolling unit which adjusts the width of the light beams.

33. (CURRENTLY AMENDED) The projector of claim 31, further comprising a ~~second~~ cylinder lens disposed between the scrolling unit and the first fly-eye lens for collimating

the color beams.

34. (CURRENTLY AMENDED) An image projector comprising:

light emitters which emit light beams of different wave lengths;

a rotatable scrolling unit which separates the emitted light beams into a plurality of color beams and, when rotated about a single axis, scrolls the color beams so as to simulate linear movement of the scrolling unit;

a light valve which turns pixels on and off according to a received image signal; and

a color beam focusing unit which focuses the color beams onto the light valve so as to form color bars corresponding to each of the colors of the plurality of color beams, the color bars received at different locations on the light valve due to the scrolling.